

Kaho'olawe Island Reserve, HI Standard Operating Procedure



SOP NO. A8	REVISION NO: 0	FILE NO: A8-R0-C0
	CHANGE NO: 0	
OPERATION Environmental and Natural Resources Protection		
PREPARED BY:		REVIEWED BY:

**Parsons-UXB Joint Venture
UXO Clearance Project
Contract No.: N62742-95-D-1369
Kaho'olawe Island Reserve, HI**

SOP Cover Sheet

OPERATION: Environmental and Natural Resources Protection

- ACTIVITIES:**
- a: POL & Hazardous Material (Partial Submittal - Final)
 - b: Multimedia Sampling (To be submitted at a later date)
 - c: Hydrogeological and Geotechnical Testing/Analysis (To be submitted at a later date)
 - d: Violation of Bacterial, Chemical, or Radiological Standards (To be submitted at a later date)
 - e: Erosion Control (To be submitted at a later date)
 - f: Natural Resources Protection (Final)
 - g: Prevention of Introduction of Alien Terrestrial and Marine (Final)

ORGANIZATIONAL SYMBOL:

AUTHORITY: Contract No. N62742-95-D-1369

REFERENCE: Section C, Parts 4.2.5.3, 10.3; 7.5; 10.8.2; 4.2.2; 4.2.1; and 4.2.1.1

PREPARED BY: _____
Bruce Campbell

Date

REVIEWED BY: _____
Steve Ovendale

Date

SUBMITTED BY: _____
William T. Batt, Program Manager

Date

APPROVALS (PUXB):

TITLE	SIGNATURE	DATE
Senior Project Manager	<u>Roy R. Barnett</u>	<u></u>
Health and Safety Manager	<u>Najmul Hasan</u>	<u></u>
UXO Safety Officer	<u>John Boyden</u>	<u></u>
Project QC Manager	<u>Richard Burtnett</u>	<u></u>
UXO QC Manager	<u>George DeMetropolis</u>	<u></u>
Range Control/Operations Officer	<u>Kevin Lombardo</u>	<u></u>
Historic Preservation Manager (If Applicable)	<u>Hallett Hammatt</u>	<u></u>

CONCURRENCES (U.S. NAVY)

Contracting Officer	<u></u>	<u></u>
Technical Representative	<u>Clyde Higa</u>	<u></u>
Contracting Officer	<u>Christine Arigo</u>	<u></u>

ANNUAL REVIEW (Choose applicable internal reviewers):

TITLE	SIGNATURE	DATE
APPROVALS (PUXB)		
Senior Project Manager	<u>Roy R. Barnett</u>	<u></u>
Health and Safety Manager	<u>Najmul Hasan</u>	<u></u>
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CONCURRENCES (U.S. NAVY)		
Contracting Officer Technical Representative	<u>Clyde Higa</u>	<u></u>
Contracting Officer	<u>Christine Arigo</u>	<u></u>

Index of Activities

- a. POL & Hazardous Material
 - a.1 Pre-Clearance Environmental Conditions Area Assessment (Final)
- b. Multimedia Sampling (To be submitted at a later date)
- c. Hydrogeological and Geotechnical Testing and Analysis (To be submitted at a later date)
- d. Violation of Bacterial, Chemical, or Radiological Standards (To be submitted at a later date)
- e. Erosion Control (To be submitted at a later date)
- f. Natural Resources Protection (Final)
 - f.1 Area Assessment: Pre Clearance Environmental Conditions Report
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 - g.1 Vehicle and Equipment Inspection and Wash
 - g.2 Prevention of Alien Species at On-Island Access Points
 - g.3 Personnel Inspection Prior to Island Access



a.1 Pre-Clearance Environmental Conditions Area Assessment

1. The Supervisor will sign this statement:
 - a. When first assigned as supervisor of the operation.
 - b. When an approved change or revision is made to the SOP.
 - c. During the last two weeks of every quarter.
 - d. When he or she has not supervised the operation for more than 15 consecutive days.
2. I have personally reviewed each of the operational steps of this SOP and have no question in my mind that the operation can be performed safely and efficiently using the SOP. I have verified to my satisfaction that my operators have been trained and can do their parts of the operation safely and efficiently, and I have instructed them to follow the SOP without deviation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from the SOP is allowed.

[illegible]

Operator's Statement

1. The operator will sign this statement:
 - a. When first assigned to the operation.
 - b. When an approved change is made to the SOP.
 - c. During the last two weeks of every quarter.
 - d. When he or she has been absent from the job for more than 15 consecutive workdays.
2. I have read or have had read to me and understand the general and specific safety and environmental requirements, personnel and explosive limits, work description, hazard briefing, and inspection requirements necessary to accomplish this operation. I have been thoroughly trained in, and am familiar with, my part of the operation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from it is allowed.

Printed Name	Signature	Badge Number	Date

Hazard Analysis

ACTIVITY: Pre-Clearance Environmental Conditions Area Assessment				PREPARER	DATE: 06/17/98			
Item no.	Description Of Operation	Description Of Hazard	Effect On Operation	Hazard			RAC without Control	RAC with Control
				Severity	Probability			
	To conduct a pre-clearance area assessment of environmental conditions at a specific Grid Map Unit (GMU).	Injury from striking or movement of unidentified UXO during walking.	Explosion/destruction	I	D	2	Establish procedures to stop movement of the Team and call for UXO Specialist when UXO encountered. Use all metals detection instrument in areas where vegetation obscures surface visibility.	IE(3)
	Driving of location markers into ground	Injury from striking or movement of unidentified UXO during insertion of the marker.	Explosion/destruction	I	D	2	Provide briefing regarding UXO/OE safety prior to entry. Use detector to select clear location for insertion of marker and around anomalies.	IE(3)

Operations

OPERATION : Environmental and Natural Resource Protection		ACTIVITY NO: A8-a.1
ACTIVITY: Pre-Clearance Environmental Conditions Area Assessment		
PURPOSE OF ACTIVITY: To conduct a pre-clearance area assessment of environmental conditions at a specific Grid Map Unit (GMU).		
EXPLOSIVE LIMITS: N/A		
DISTANCE:	ft (m)	N.E.W. (lbs):
PERSONNEL LIMITS: N/A		
OPERATORS:	SUPPORT:	OTHER:
STEP NO. & DESCRIPTION	SPECIFIC INSTRUCTIONS (Safety, Operational, Quality Checks)	
1. EM reviews Area Assessment Team weekly schedule to identify previously identified areas of concern.	(O) a. SPM provides EM with weekly area assessment schedule. b. EM reviews GMU area assessment schedule for specific areas of concern with the potential to contain non-UXO contaminants. Specific areas of concern previously identified include: <ul style="list-style-type: none"> •Lower Nursery Area Burn Pit •Landing Zone 1 Burn Pit •Base Camp Bulky Waste Storage Area •Waikahalulu Gulch Refuse Site •Seagull Landing Zone Battery Dump •Former Landing Craft Unit Staging Area •Used Oil Storage Area •Explosives Holding Area •Target Vehicle Storage Area •Base Camp Target Vehicle Storage Area •Mile Marker 4.5 Target Vehicle Storage Area •Open Storage Area •Drum Storage Area •Generator Shack •Helipads •Magazine 	
2. If there are no areas of concern located within the scheduled GMUs, proceed to Step 4.		
3. If an area of concern is located within a GMU scheduled for area assessment, proceed to Step 12.	(O) a. If an area of concern is located in a scheduled GMU, the EM contacts the SPM to arrange to accompany the area assessment team on the initial area assessment.	

No Areas of Concern Located Within Scheduled GMUs	
4. Transportation request is coordinated and scheduled per Range Control Activity A23-b.3, Island Access.	
5. Team leader will conduct general work and safety briefing in accordance with Range Control Activity A23-d.1, as well as address activity specific topics.	
6. Activity specific equipment checkout.	
7. Request for authorization to transit to GMU per Activity A23-d.1, Personnel Tracking, for an individual or a team (as applicable).	
On-Island Activity Commencement	
8. Area Assessment Team conducts area assessment and completes Part 1 of ENRF-01, Environmental Pre-Clearance Conditions Report (Environmental).	(O) a. NRS conducts area assessment and completes Part 1 of form ENRF-01. b. NRS forwards ENRF-01 to EM for review.
9. Request for authorization to depart GMU per Activity A23-d.1, Personnel Tracking, for an individual or a team (as applicable).	
On-Island Activity Completion	
10. EM reviews Form ENRF-01.	
11. If no potential environmental contaminants are noted on ENRF-01, then proceed to Step 18. If potential contaminants are noted, proceed to Step 12.	
Area of Concern is Located in a Scheduled GMU, or Initial Assessment Indicates Potential Contaminants	
12. Transportation request is coordinated and scheduled per Range Control Activity A23-b.3, Island Access.	
13. Team leader will conduct general work and safety briefing in accordance with Range Control Activity A23-d.1, as well as address activity specific topics.	
14. Activity specific equipment check-out.	
15. Request for authorization to transit to GMU per Activity A23-d.1, Personnel Tracking, for an individual or a team (as applicable).	
On-Island Activity Commencement	
16. EM conducts environmental assessment of subject GMU.	(O) a. EM conducts additional literature review as necessary. Specific documents may include, but not be limited to: <ul style="list-style-type: none"> • Work Plan, Appendix C, Environmental and Natural Resources Protection Plan • Engineering Trade-Off Analysis • Model Project Documents • Documentation of Existing Conditions Reports b. EM documents review in Part 2 of ENRF-01. c. EM conducts interviews with personnel knowledgeable of previous activities at location. d. EM documents interviews in Part 3 of ENRF-01.

	e. EM conducts site inspection with UXO Specialist. f. EM documents inspection in Part 4 of ENRF-01.
17. Request for authorization to depart GMU per Activity A23-d.1, Personnel Tracking, for an individual or a team (as applicable).	
On-Island Activity Completion	
18. EM makes determination of additional actions warranted.	(O) a. EM completes Part, 5, Findings and Recommendations, of ENRF-01. b. EM determines if further action is warranted. Further action may include, but not be limited to: <ul style="list-style-type: none"> • Development of a field sampling plan • Surface and/or subsurface investigations • Waste or debris samplings • Removal actions • No further action
19. EM completes Form ENRF-01 and forwards copy to DM for data entry into grid map folder.	(O) a. DM enters information into DMS.
20. EM signs and submits completed ENRF-01 to Review Board for disposition.	(O) a. Review Board makes disposition based on information contained in ENRF-01. b. EM conducts follow up actions as directed by Review Board determination.
SPECIAL REQUIREMENTS: NONE	
PERSONNEL BY LABOR CATEGORY EM NRS UXOS	
EQUIPMENT	
ITEM	QUANTITY
Hand-Held Radio	
Digital Camera	
Magnetometer (as needed for flagging)	
Red stripe flagging	
Metal stakes	
ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT: NONE	
SPECIAL TRAINING AND REFRESHER REQUIREMENTS: NONE	
WAIVERS, EXEMPTIONS, SPECIFIC AUTHORIZATIONS, OR APPROVED DEVIATIONS THAT APPLY TO THIS ACTIVITY: NONE	

**Pre-Clearance Environmental Conditions Report
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii**

Part 1 Area Assessment (for NRS or EM use)						
Name:	Badge No.:	Grid Map Unit: 	Date:			
Area Pre-Investigation Notes:						
Previously Identified Area of Concern? <input type="checkbox"/> Yes <input type="checkbox"/> No				If Yes, description:		
Potential Non-UXO Environmental Contaminants Observed: <input type="checkbox"/> None Observed <input type="checkbox"/> Soil/Ash or Burn Residue <input type="checkbox"/> Metallic Debris <input type="checkbox"/> Batteries <input type="checkbox"/> Components <input type="checkbox"/> Asbestos <input type="checkbox"/> Tires <input type="checkbox"/> Unknown Liquids <input type="checkbox"/> Soils contaminated with oil <input type="checkbox"/> Soils contaminated with non-POL constituents <input type="checkbox"/> Unknown Solids <input type="checkbox"/> Other (specify):						
Digital Photo Record:	Photo #	Disc #	Frame #	View Direction:	View Image	
	1	_____	_____	<input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W	□	
	2	_____	_____	<input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W	□	
	3	_____	_____	<input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W	□	
	4	_____	_____	<input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W	□	
	5	_____	_____	<input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W	□	
Part 2: Literature Review (for EM use)						
Document Title:					Date:	
Description:						
Document Title:					Date:	
Description:						
Document Title:					Date:	
Description:						

**Pre-Clearance Environmental Conditions Report
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii**

Part 3: Personnel Interview Documentation (for EM use)

Interviewee Name:	Date:
Description:	
Interviewee Name:	Date:
Description:	
Interviewee Name:	Date:
Description:	
Part 4: Site Inspection Report (for EM use)	

**Pre-Clearance Environmental Conditions Report
UXO Clearance Project
Kaho'olawe Island Reserve, Hawaii**

Part 5: Findings and Recommendations (for EM use)

Findings:

Recommendations: ☐ Additional Action Warranted ☐ No Further Action Required

Description of Recommended Additional Actions:

Approval Signatures

Natural Resource Specialist (NRS):

Name:	Badge No.:	Signature:	Date:
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Environmental Manager (EM):

Name:	Badge No.:	Signature:	Date:
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Chair, Review Committee (RCO):

Name:	Badge No.:	Signature:	Date:
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**Pre-Clearance Environmental Conditions Report
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii**

Instructions	
Part 1 Area Assessment (for NRS or EM use)	
Name	Enter the name of the person completing the form (either the NRS or the EM).
Badge No.	Enter the badge number of the person completing the form.
Grid Map Unit	Enter the Grid Map Unit being reported upon.
Date	Enter today's date.
Area Pre-Investigation Notes	Enter any applicable information from the area pre-investigation.
Previously Identified Area of Concern?	Check box to indicate whether or not the GMU contains a previously identified area of concern.
If Yes, description	If yes was checked, enter a description of the previously identified area of concern. Such areas include: Bulky Waste Storage Area, Explosives Holding Area, Target Vehicle Storage Area, Vehicle Parking Areas, Lower Nursery Area Burn Pit, Base Camp Target Vehicle Storage Area, Helipads, LZ 1 Burn Pit, Mile Marker 4.5 Target Vehicle Storage Area, Former LCU Staging Area, Seagull LZ Battery Dump, Open Storage Area, Magazine, Waikahalulu Refuse Storage Area (Klines Gulch), Drum Storage Area, Used Oil Storage Area, Generator Shack
Potential Non-UXO Environmental Contaminants Observed	Check all potential environmental contaminants not related to UXO that are observed in the GMU. If other is checked, please specify. Components can include debris, drums, crates, and electrical equipment. Potential asbestos contamination can come from brake shoes, insulation, flooring materials, wallboard, etc.
Digital Photo Record	Record the Disc Number, Frame Number, and View Direction of each photo taken in the GMU. Leave view image space blank.
Part 2: Literature Review	Document any literature reviewed as part of the environmental assessment.
Part 3: Personnel Interviews	Document any personnel interviewed as part of the environmental assessment.
Part 5: Site Inspection Report	Document site inspection conducted as part of the environmental assessment.
Part 6: Findings and Recommendations	State the findings for this GMU. Check whether additional action for the GMU is warranted. If so, enter the recommended additional action(s).
Approval Signatures	Enter the names, badge numbers and signatures of the NRS, EM, and RCO. If the NRS did not perform the initial area assessment (Part 1), put N/A in the name block. Enter the date each signature is executed.



f.1 Natural Resource Protection - Area Assessment: Pre-Clearance Environmental Conditions Report

Supervisor's Statement

1. The Supervisor will sign this statement:
 - a. When first assigned as supervisor of the operation.
 - b. When an approved change or revision is made to the SOP.
 - c. During the last two weeks of every quarter.
 - d. When he or she has not supervised the operation for more than 15 consecutive days.
2. I have personally reviewed each of the operational steps of this SOP and have no question in my mind that the operation can be performed safely and efficiently using the SOP. I have verified to my satisfaction that my operators have been trained and can do their parts of the operation safely and efficiently, and I have instructed them to follow the SOP without deviation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from the SOP is allowed.

Printed Name	Signature	Badge Number	Date

Operator's Statement

1. The operator will sign this statement:
 - a. When first assigned to the operation.
 - b. When an approved change is made to the SOP.
 - c. During the last two weeks of every quarter.
 - d. When he or she has been absent from the job for more than 15 consecutive workdays.
2. I have read or have had read to me and understand the general and specific safety and environmental requirements, personnel and explosive limits, work description, hazard briefing, and inspection requirements necessary to accomplish this operation. I have been thoroughly trained in, and am familiar with, my part of the operation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from it is allowed.

Printed Name	Signature	Badge Number	Date

Hazard Analysis

ACTIVITY: Area Assessment		PREPARER			DATE: 06/17/98		
Item no.	Description Of Operation	Description Of Hazard	Effect On Operation	Hazard		RAC without Control	RAC with Control
				Severity	Probability		
	To safely and correctly identify natural resources within each Grid Map Unit during area assessment before UXO clearance activities take place.	Injury from striking or movement of unidentified UXO during walking.	Explosion/destruction	I	D	2	IE(3) Establish procedures to stop movement of the Team and call for UXO Specialist when UXO encountered. Use all metals detection instrument in areas where vegetation obscures surface visibility. Provide briefing regarding UXO/OE safety prior to entry.
	Driving of location marker into ground.	Injury from striking or movement of unidentified UXO during insertion of the marker.	Explosion, destruction	I	D	2	IE(3) Use detection instrument to select a clear location for insertion of markers and around anomalies.

Operations

OPERATION: Environmental and Natural Resources Protection		ACTIVITY NO.: A8-f.1
ACTIVITY: Natural Resource Protection - Area Assessment		
PURPOSE OF ACTIVITY: To safely and correctly identify natural resources within each Grid Map Unit before UXO clearance activities take place.		
EXPLOSIVE LIMITS: N/A		
DISTANCE: ft (m) N.E.W. (lbs):		
PERSONNEL LIMITS		
OPERATORS: 1 SUPPORT: 1 OTHER:1		
STEP NO. & DESCRIPTION		SPECIFIC INSTRUCTIONS (Safety, Operational, Quality Checks)
1. The Natural Resources Specialist (NRS) shall review Sections 1 and 13 of the Environmental and Natural Resources Protection Plan		(O) Copy of the Environmental and Natural Resources Protection Plan shall be kept at the Maui Technical Office. (S) Provide briefing regarding UXO/OE safety.
2. Transportation request is coordinated and scheduled per SOP A23-b.3, Island Access.		
3. Team leader will conduct general work and safety briefing in accordance with A23-d.1, as well as address activity specific topics.		
4. Request for authorization to transit to GMU per SOP A23-d.1, Personnel Tracking, for an individual or a team (as applicable).		
On-Island Activity Commencement		
5. The NRS shall assess vegetation coverage on natural resources form. Five categories as listed below should be recorded for each grid or subgrid: Impassable (>75% vegetation growth) Dense (50-75% vegetation growth) Moderate (25-50% vegetation growth) Small Clumps (5-25% vegetation growth) None (<5% vegetation growth)		(Q) Fill out appropriate fields on form titled, Pre-Clearance Environmental Conditions Report for Natural Resources (NRF-01).
6. Confirm the Community Type of the grid from area pre-investigation and record.		(Q) Fill out appropriate fields on NRF-01. (S) Follow procedures to stop movement of assessment team when UXO are encountered

7. Record the dominant species of the grid. Record no more than two dominant species per GMU.	(O) The dominant species will be 50% or greater coverage in the area. Estimate the percent cover of the dominant species using modified Braun-Blanquet: 5= >75% 4=50-75% 3=25-50% 2=5-25% 1=<5%
8. Assess topography and soil type (if possible) on natural resources form: Gully (>70% slope) Steep slope (30-70% slope) Moderate Slope (15-30% slope) Gentle Slope (3-15% slope) Flat (0-3% slope)	(O) Compare findings with Area pre-investigation findings.
9. Assess areas of erosion. Use the following categories for recording: Minimal, moderate or severe.	
10. If the erosion is severe take a digital photo of the area and communicate the findings to the EM.	(O) If severe erosion exists, communicate findings to the Environmental Manager and Architect/Engineer.
11. Identify potential areas of environmental contamination and/or potential environmental hazards. Log observations.	(O) NRS conducts an environmental area assessment and completes Part I of form title Pre-Clearance Environmental Conditions Report (ENF-01). NRS shall forward form ENF-01 to EM for review. (O) Take a digital photo of the area and communicate the findings to the EM.
12. If no potential environmental contaminants exist, write, "No environmental contaminants observed" on form ENF-01 and proceed to step 14.	
13. Take digital photos from each of the four grid corners and label as follows: A= SW corner B= SE corner C= NE corner D= NW corner	
14. Collect species that cannot be identified in the field and give it a reference number using the grid number. Clearly mark the collection for the NRM to identify.	(O) Sketch approximate location of unidentified species on GMU map. (O) Plant collection should include as much of the plant as possible such as leaves, flowers, fruits, stem, etc. The NRM will identify the species and communicate the identification to the Natural Resource personnel.
15. Identify and record the presence of any endangered plant species and describe associated habitat. DO NOT COLLECT OR HARM ANY ENDANGERED PLANT SPECIES.	(O) If an endangered plant is located communicate the information to the NRM. The NRM will log the information as part of his daily log and communicate the information via Findings and Recommendations section of form NRF-01 for the Review Board. (O) Confirm any endangered species locations from area pre-investigation.
16. Count the number of individuals of the endangered plant species (or, if appropriate, estimate the number of populations) in each stage of development.	(O) Fill in the appropriate boxes on the attached NRF-01 with the estimated number of immature, young, and adult individuals.

17. Determine the current appearance of endangered species.	(O) Check the appropriate box (flowering, fruiting, dormant, dead or other) on NRF-01. If other, describe.
18. Identify any near-term threats to the continued survival of the endangered species.	(O) Check the appropriate box (alien plants or animals, human impacts, insects, substrate, fire) on NRF-01.
19. Mark perimeter of endangered plant species with wooden stakes and blue striped ribbon.	(Q) The barrier around an endangered plant shall be no less than one meter from the outer boundary of the plant or plant population. Blue and white flagging shall be tied to the upper one-third of the wooden stakes and should be visible from 100 meters. (S) The UXOSS will determine a clear location prior to driving stakes, per Range Control Activity A23-c.1, Area Assessment.
20. Locate boundary of endangered species. Record location on NRF-01.	(O) NRM will enter positional data for all endangered species into the KIGIS. (O) Surveyor will locate boundaries.
21. Identify Tobacco tree, <i>Nicotiana glauca</i> and closely inspect individuals for the presence of the caterpillar stage for Blackburn's sphinx moth.	(O) If Blackburn's sphinx moth caterpillars are found communicate the sighting to the NRM. He will log the sighting as part of his daily log.
22. Label with blue striped ribbon any plants with Blackburn's sphinx moth caterpillars and locate for recording on the Environmental Conditions Report Form.	
23. Observe coastal grids for any endangered marine animal sightings and record on NRF-01.	
24. Locate, record and communicate the endangered animal sighting to the NRM.	(O) The NRM will log the sighting as part of his daily report. (O) The NRM will ensure regulatory compliance and monitor, if necessary, operations in the area of endangered marine life.
25. Determine if GMU contains any potential for wetlands. Determine whether hydrophytic vegetation is present. By examining the species listed on NRF-01, mark any indicator species appropriately, OBL, FACW, and/or FAC. If no indicator species are marked, no wetland is present.	OBL= Plants that occur almost always (estimated probability >99 percent) in wetlands under natural conditions, but which may also occur rarely (estimated probability <1 percent) in nonwetlands. FACW= Plants that occur usually (estimated probability >67 percent to 99 percent) in wetlands, but also occur (estimated probability 1 percent to 33 percent) in nonwetlands. FAC= Plants with a similar likelihood (estimated probability 33 percent to 67 percent) of occurring in both wetlands and nonwetlands.
On-Island Activity Completion	
26. Request for authorization to depart GMU per SOP A23-d.1, Personnel Tracking, for an individual or a team (as applicable).	

27. The NRM with consultation with NRS will submit findings and recommendations for appropriate monitoring (on-site or pre-operational) as necessary for grids with endangered species.	(O) Findings and Recommendations from the Area Assessment should identify mitigation actions, corrective measures and/or protective works needed for clearance operations to continue to UXO disposition.
28. The NRM with consultation with NRS will submit findings and recommendations for appropriate monitoring (on-site or pre-operational) as necessary for grids with wetlands.	(Q) Ensure that Findings and Recommendations are reviewed and approved by the NRQCM for Review Board. (O) If necessary, see SOP f.2 for Wetland Delineation.
29. Sign and submit form NRF-01 to Data Entry Clerk for electronic input. Sign and submit form ENF-01 to EM.	
SPECIAL REQUIREMENTS: Natural resources and alien species prevention training Experience and training in wetland properties.	
PERSONNEL BY LABOR CATEGORY NRS NRM	
EQUIPMENT	
ITEM	QUANTITY
Pre-Clearance Environmental Conditions Report Form for Natural Resources and Environmental.	No less than 2 copies per grid
Digital Camera	1
Binoculars	1
ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT: None	
SPECIAL TRAINING AND REFRESHER REQUIREMENTS: None	
WAIVERS, EXEMPTIONS, SPECIFIC AUTHORIZATIONS, OR APPROVED DEVIATIONS THAT APPLY TO THIS ACTIVITY: None	

Pre-Clearance Environmental Conditions Report for Natural Resources
UXO Clearance Project
Kaho'olawe Island Reserve, Hawaii

Name:	Badge No.:	Grid Map Unit: <div style="border: 1px solid black; width: 100px; height: 20px; margin: 2px;"></div>	Date:
Area Pre-Investigation Notes:			
Slope: <input type="checkbox"/> Flat (0°-3°) <input type="checkbox"/> Gentle Slope (3°-15°) <input type="checkbox"/> Moderate Slope (15°-30°) <input type="checkbox"/> Steep Slope (30°-70°) <input type="checkbox"/> Cliff, Gulch (>70°)			
Vegetation Density: <input type="checkbox"/> None (<5%) <input type="checkbox"/> Small Clumps (3-25%) <input type="checkbox"/> Moderate (25-50%) <input type="checkbox"/> Dense (50-75%) <input type="checkbox"/> Impassable (75-100%)			
Erosion: <input type="checkbox"/> Minimal <input type="checkbox"/> Moderate <input type="checkbox"/> Severe		Drainageway Present? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Soils: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"><input type="checkbox"/> Badland</div> <div style="width: 50%;"><input type="checkbox"/> Beaches</div> <div style="width: 50%;"><input type="checkbox"/> Kahoolawe</div> <div style="width: 50%;"><input type="checkbox"/> Kaneloa</div> <div style="width: 50%;"><input type="checkbox"/> Keauialalo</div> <div style="width: 50%;"><input type="checkbox"/> Mala</div> <div style="width: 50%;"><input type="checkbox"/> Puu Lai</div> <div style="width: 50%;"><input type="checkbox"/> Rock Outcrop</div> <div style="width: 50%;"><input type="checkbox"/> Pebble Land</div> <div style="width: 50%;"><input type="checkbox"/> Sapolite</div> <div style="width: 50%;"><input type="checkbox"/> Usterts</div> <div style="width: 50%;"><input type="checkbox"/> Wai Honu</div> <div style="width: 50%;"><input type="checkbox"/> Wai Kapu</div> </div>			
Community Types			
Native: <input type="checkbox"/> Ma'o Coastal Dry Shrubland <input type="checkbox"/> 'Ilima Coastal Dry Shrubland <input type="checkbox"/> 'Aki'aki Coastal Dry Grassland <input type="checkbox"/> Pili Lowland Dry Grassland <input type="checkbox"/> Hawaiian Mixed Shrub Coastal Dry Cliff			
Alien: <input type="checkbox"/> Kiawe Forest/Woodland <input type="checkbox"/> Grassland/Sparse Woodland <input type="checkbox"/> Pickleweed Flat <input type="checkbox"/> Hardpan/Bare Substrate <input type="checkbox"/> Disturbed (roads, graded areas, etc.)			
Aquatic: <input type="checkbox"/> Ephemeral Pool <input type="checkbox"/> Intermittent Stream			
Dominant Plant Species			
Species 1 Name:	Species 1 Percent Cover: <input type="checkbox"/> > 75% <input type="checkbox"/> 50-75% <input type="checkbox"/> 25-50% <input type="checkbox"/> 5-25% <input type="checkbox"/> <5%		
Species 2 Name:	Species 2 Percent Cover: <input type="checkbox"/> > 75% <input type="checkbox"/> 50-75% <input type="checkbox"/> 25-50% <input type="checkbox"/> 5-25% <input type="checkbox"/> <5%		
Endangered Species			
Name	Location		
	X	Y	Z
Associated Habitat:			
Threats: <input type="checkbox"/> Alien Animals <input type="checkbox"/> Alien Plants <input type="checkbox"/> Human Impacts <input type="checkbox"/> Insects <input type="checkbox"/> Substrate <input type="checkbox"/> Fire <input type="checkbox"/> Other (specify):			

Pre-Clearance Environmental Conditions Report for Natural Resources
UXO Clearance Project
Kaho'olawe Island Reserve, Hawaii

Endangered Species (cont.)					
Counts					
Type	No.	Type	No.		
Immature		Individual(s)			
Young		Populations(s)			
Adult					
Appearance: <input type="checkbox"/> Flowering <input type="checkbox"/> Fruiting <input type="checkbox"/> Dormant <input type="checkbox"/> Dead <input type="checkbox"/> Other:		Avoidance Barrier? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Wetland Areas					
Hydrophytic Plants Present: <input type="checkbox"/> Yes <input type="checkbox"/> No					
If yes, species type:			Indicator: <input type="checkbox"/> OBL <input type="checkbox"/> FACW <input type="checkbox"/> FAC		
Hydric Soils Present: <input type="checkbox"/> Yes <input type="checkbox"/> No					
If yes, explain basis for determination:					
Saturated Soils Present: <input type="checkbox"/> Yes <input type="checkbox"/> No					
If yes, explain basis for determination:					
Photographs					
Digital Photo Record:	Photo #	Disc #	Frame #	View Direction:	View Image
	1	_____	_____	<input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W	<input type="checkbox"/>
	2	_____	_____	<input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W	<input type="checkbox"/>
	3	_____	_____	<input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W	<input type="checkbox"/>
	4	_____	_____	<input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W	<input type="checkbox"/>
	5	_____	_____	<input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W	<input type="checkbox"/>
Findings and Recommendations					
Recommended Land Clearing Strategy			Preferred Method		
<input type="checkbox"/> Mechanical/Manual					
<input type="checkbox"/> Defoliation					
<input type="checkbox"/> Controlled Burn			N/A		
<input type="checkbox"/> No Clearing			N/A		
Monitoring Activity: <input type="checkbox"/> Pre-Operational <input type="checkbox"/> On-Site					
Notes:					
Natural Resource Manager:					
Name:		Badge No.:	Signature:		Date:

Pre-Clearance Environmental Conditions Report for Natural Resources
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

Instructions	
Name	Enter the name of the NRS completing this form.
Badge No.	Enter the badge number of the NRS completing this form.
Grid Map Unit	Enter the Grid Map Unit in which the assessment is taking place.
Date	Enter the date the form is being completed.
Area Pre-Investigation Notes	Enter any pertinent notes from the area pre-investigation activity.
Slope	Check the box that best describes the slope in the GMU.
Vegetation Density	Check the box that best describes the density of vegetation in the GMU.
Erosion	Check the box that best describes the amount of erosion present in the GMU.
Drainageway Present?	Check yes if a drainageway is present in the GMU.
Soils	Check the type(s) of soils present in the GMU.
Community Types	
Native	Check the box that best describes the native plant community in the GMU.
Alien	Check the box that best describes the alien plant community in the GMU.
Aquatic	Check the box that best describes the aquatic plant community in the GMU.
Dominant Plant Species	
Species Name	Name up to two dominant plant species in the GMU.
Percent Cover	For each dominant plant species, check the box that best describes the amount of coverage of the species.
Endangered Species	
Name	List any endangered species present in the GMU.
Location	Enter the GPS coordinates for each endangered species.
Associated Habitat	Describe the associated habitat of the endangered species.
Threats	Check all that apply within the GMU.
Counts	Enter the counts, by category, of endangered species.
Appearance	Check the appearance of the endangered species.
Avoidance Barrier?	Is an avoidance barrier recommended to help protect the species?
Wetland Areas	
Hydrophytic Plants Present	Check yes if hydrophytic plants are present in the GMU.
Species Type	If hydrophytic plants are present, indicate the species.
Indicator	Check the appropriate indicator status for the hydrophytic species.
Hydric Soils Present	Check yes if hydric soils are present.
Basis for Determination	If hydric soils are present, describe the basis for your determination.
Saturated Soils Present	Check yes if saturated soils are present.
Basis for Determination	If saturated soils are present, describe the basis for your determination.
Photographs	
Digital Photo Record	Record the Disc Number, Frame Number, and View Direction of each digital photo taken in the GMU. Leave view image space blank.
Findings and Recommendations	
Recommended Land Clearing Strategy	Check the recommended land clearing strategy for this GMU. If Mechanical/Manual or Defoliation is checked, enter the preferred method to be used.
Monitoring Activity	Check the recommended natural resource monitoring activities for this GMU.
Notes	Enter any notes regarding the findings and recommendations.
Natural Resource Manager	Enter the name, badge number and signature of the Natural Resource Manager. Enter the date the form was signed.



f.2 Natural Resource Protection - Wetland Delineation

Supervisor's Statement

1. The Supervisor will sign this statement:
 - a. When first assigned as supervisor of the operation.
 - b. When an approved change or revision is made to the SOP.
 - c. During the last two weeks of every quarter.
 - d. When he or she has not supervised the operation for more than 15 consecutive days.
2. I have personally reviewed each of the operational steps of this SOP and have no question in my mind that the operation can be performed safely and efficiently using the SOP. I have verified to my satisfaction that my operators have been trained and can do their parts of the operation safely and efficiently, and I have instructed them to follow the SOP without deviation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from the SOP is allowed.

Printed Name	Signature	Badge Number	Date

Operator's Statement

1. The operator will sign this statement:
 - a. When first assigned to the operation.
 - b. When an approved change is made to the SOP.
 - c. During the last two weeks of every quarter.
 - d. When he or she has been absent from the job for more than 15 consecutive workdays.
2. I have read or have had read to me and understand the general and specific safety and environmental requirements, personnel and explosive limits, work description, hazard briefing, and inspection requirements necessary to accomplish this operation. I have been thoroughly trained in, and am familiar with, my part of the operation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from it is allowed.

Printed Name	Signature	Badge Number	Date

Hazard Analysis

ACTIVITY: Wetland Delineation		PREPARER				DATE: 06/17/98	
Item no.	Description Of Operation	Description Of Hazard	Effect On Operation	Hazard		RAC without Control	RAC with Control
				Severity	Probability		
	To provide procedures for the safe and correct delineation of potential wetland areas less than 5 acres in size.	Injury from striking or movement of unidentified UXO during walking.	Explosion/destruction	I	D	2	IE(3)
	Driving of location markers into the ground.	Injury from striking or movement of unidentified UXO during insertion of the marker.	Explosion/destruction	I	D	2	IE(3)

Establish procedures to stop movement of the Team and call for UXO Specialist when UXO encountered. Use all metals detection instrument in areas where vegetation obscures surface visibility.

Provide briefing regarding UXO/OE safety prior to entry.

Use detectors to select clear location for insertion of marker and avoid anomalies.

Operations

OPERATION: Environmental and Natural Resource Protection		ACTIVITY NO.: A8-f.2
ACTIVITY: Natural Resource Protection - Wetland Delineation		
PURPOSE OF ACTIVITY: To provide procedures for the safe and correct delineation of potential wetland areas.		
EXPLOSIVE LIMITS: N/A		
DISTANCE: ft (m) N.E.W. (lbs):		
PERSONNEL LIMITS		
OPERATORS: 1 SUPPORT: 1 OTHER: 1		
STEP NO. & DESCRIPTION		SPECIFIC INSTRUCTIONS (Safety, Operational, Quality Checks)
1. Transportation request is coordinated and scheduled per SOP A23-b.3, Island Access.		(S) Provide briefing regarding UXO/OE Safety.
2. Team leader will conduct general work and safety briefing in accordance with A23-d.1, as well as address activity specific topics.		(O) Specific topics shall include endangered species avoidance, UXO safety, wetlands, and alien species prevention.
3. Activity specific equipment check-out.		(O) Obtain wooden stakes and flagging from MTO and RC/OC prior to GMU transport.
4. Request for authorization to transit to GMU per SOP A23-d.1, Personnel Tracking, for an individual or a team (as applicable).		
Activity Commencement		
5. The NRS shall be familiar with Corps of Engineers Wetland Delineation Manual (January 1987)		(O) Copy will be on file at MTO
6. The NRS shall obtain wetland information from pre-investigation and Environmental Conditions Report for Natural Resources (NRF-01) for the GMU being observed.		(O) Obtain a copy of NRF-01 for the GMU from the MTO.
7. Determine whether hydrophytic vegetation is present. By examining the species listed on NRF-01, mark any indicator species appropriately, OBL, FACW, or FAC. If no indicator species are marked, no wetland is present.		
8. Apply wetland hydrologic indicators and record presence if applicable.		
9. Determine whether wetland hydrology is present. Fill out hydrology portion of Area Assessment Form.		
10. If hydric soils are present, record.		

11. If hydric soils cannot be determined, have UXO Specialist (UXOS) perform a sweep of area with point detection instrument. Upon UXO sweep of the pit area, the NRS shall dig the soil pit with soil spade.	(S) The UXOSS will determine a clear location prior to driving stakes, per Range Control Activity A23-c.1, Area Assessment. (S) Obtain approval from UXOS to dig any soil pit (O) Soil pit can be as deep as 12 inches. (O) Soil pits may have to be dug in each representative plant community type where hydric soils are predicted.
12. The NRM shall examine soil at each location and compare its characteristics immediately below the A-horizon of 10 inches (whichever is shallower) with the hydric soil indicators as listed in Part III, paragraph 44 and/or 45 in "Army Corps Wetland Delineation Manual". Record findings on Area Assessment Form.	
13. The NRM shall determine whether hydric soils are present. If no hydric soils are present, there is no wetland. Complete the soil section of Area Assessment Form.	
14. Make wetland determination.	(O) If the three indicators (soil, vegetation, and hydrology) are present in the entire area, the entire area is a wetland.
15. If only parts of the area are determined wetlands then mark each plant community type on the base map and mark W for wetland and N for nonwetland.	
16. The NRM shall delineate wetland boundary.	(O) Place wooden stakes along boundaries of wetland based on soil hydrology, soil type, and wetland plant species and tie with pink and black plastic ribbon. Number each wooden stake consecutively.
17. The UXOS shall sweep area for wooden stakes with point detection instrument.	(O) UXOS shall determine if ground is suitable for wooden stake and will place the stake into the ground, per Range Control Activity A23-c.1, Area Assessment.
18. Upon UXOS approval, the NRS may place wooden stakes no less than 2 inches deep into the soil	
19. Continue steps 10 to 18 until a wetland boundary is formed and visible.	(O) Wooden stakes shall be placed at distances of visual sight and may vary depending upon vegetation.
20. The Surveyor shall locate the perimeter of the wetland.	
21. Communicate the wetland delineation as part of the Environmental Conditions Report for Natural Resources (NRF-01) for Review Board.	(O) Navy may submit information on the wetland delineation for concurrence from USACE.
22. NRM shall walk the delineated wetland with the Navy wetland approving authority for approval, and log record and findings as part of the Environmental Conditions Report (NRF-01).	
Activity Completion	
23. Request for authorization to depart GMU per SOP A23-d.1, Personnel Tracking, for an individual or a team (as applicable).	


24. NRM will communicate the approved wetland delineation to the Database manager for inclusion in the Electronic Grid Folder.	
SPECIAL REQUIREMENTS: None	
PERSONNEL BY LABOR CATEGORY NRM NRS UXOSS Surveyor Wetland consultant (if required)	
EQUIPMENT	
ITEM	QUANTITY
Pre-Clearance Environmental Conditions Report for Natural Resources	For all GMUs under consideration
"A Guide to Pacific Wetland Plants"	
"National List of Plant Species That Occur in Wetlands: Hawaii (Region H)"	
Soil spade	
Munsell Color Charts (Munsell Color (1975) (soils only))	
Pink and black plastic ribbon	
Wooden stakes	As necessary to delineate the wetland boundary
ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT: None	
SPECIAL TRAINING AND REFRESHER REQUIREMENTS: Wetland Delineation Training	
WAIVERS, EXEMPTIONS, SPECIFIC AUTHORIZATIONS, OR APPROVED DEVIATIONS THAT APPLY TO THIS ACTIVITY: None	



g.1 Prevention of Introduction of Alien Species – Vehicle and Equipment Inspection and Wash

Supervisor's Statement

1. The Supervisor will sign this statement:
 - a. When first assigned as supervisor of the operation.
 - b. When an approved change or revision is made to the SOP.
 - c. During the last two weeks of every quarter.
 - d. When he or she has not supervised the operation for more than 15 consecutive days.
2. I have personally reviewed each of the operational steps of this SOP and have no question in my mind that the operation can be performed safely and efficiently using the SOP. I have verified to my satisfaction that my operators have been trained and can do their parts of the operation safely and efficiently, and I have instructed them to follow the SOP without deviation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from the SOP is allowed.

Printed Name	Signature	Badge Number	Date
Benton K. Pong			29 June 1998

Operator's Statement

1. The operator will sign this statement:
 - a. When first assigned to the operation.
 - b. When an approved change is made to the SOP.
 - c. During the last two weeks of every quarter.
 - d. When he or she has been absent from the job for more than 15 consecutive workdays.
2. I have read or have had read to me and understand the general and specific safety and environmental requirements, personnel and explosive limits, work description, hazard briefing, and inspection requirements necessary to accomplish this operation. I have been thoroughly trained in, and am familiar with, my part of the operation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from it is allowed.

Printed Name	Signature	Badge Number	Date
JOHNNY STACK	<i>Johnny Stack</i>		06/29/98
CATHERINE BRISON	<i>Catherine A. Brison</i>		06/29/98

Hazard Analysis

ACTIVITY: Prevention of Introduction of Alien Species - Vehicle and Equipment Inspection and Wash		PREPARER	DATE: 06/17/98				
Item no.	Description Of Operation	Description Of Hazard	Effect On Operation	Hazard		RAC without Control	RAC with Control
				Severity	Probability		
1	Vehicle Inspection and Wash	This operation does not require a hazard analysis.					

Operations

OPERATION: Environmental and Natural Resource Protection		ACTIVITY NO.: A8-g.1
ACTIVITY: Prevention of Introduction of Alien Species - Vehicle and Equipment Inspection and Wash		
PURPOSE OF ACTIVITY: To prevent the accidental introduction of alien species via vehicles and equipment before deployment to Kaho'olawe.		
EXPLOSIVE LIMITS: N/A		
DISTANCE: ft (m) N.E.W. (lbs):		
PERSONNEL LIMITS: N/A		
OPERATORS: SUPPORT: OTHER:		
STEP NO. & DESCRIPTION		SPECIFIC INSTRUCTIONS (Safety, Operational, Quality Checks)
1. The Logistics Manager (LM) shall read and understand Section 14 of the Environmental and Natural Resources Protection Plan.		(O) A copy of the Environmental and Natural Resources Protection Plan shall be stored at the Maui Technical Office for review.
2. Review documents identifying previous use, and prior geographic location of vehicle and/or equipment under inspection.		(O) Separate out new vehicles from those used in areas outside Hawai'i and those used on other neighbor islands. (O) New vehicles and equipment may receive minimal inspection.
3. The LM will visually inspect all surfaces, compartments, crevices, tires, and undercarriage and identify areas with hardened soil, seeds or insects. If washing is necessary, proceed to step 5.		(Q) NRQCM shall be available for additional inspection of the vehicle or equipment if necessary.
4. If no visibly hardened dirt, seeds, soil, or any insects are present, proceed to step 8.		
5. If necessary, wash vehicle or equipment entirely clean of soil with high-pressure water and phosphate soap. Fumigation, steam cleaning with hot water, and disinfectant may also be necessary.		(O) Scrub areas of dirt, soil, insects and seeds as necessary. (Q) The purpose of this step is NOT to wash the vehicle or equipment but rather to clean contaminated areas.
6. Visually re-inspect areas to ensure that areas are soil- and seed-free. Go back to step 5 if additional washing is necessary.		(O) NRM or NRQCM shall be available for additional inspection if necessary.
7. Place vehicle or equipment in a clean area, where it is unlikely to become re-contaminated, and hold for shipment to island.		
8. Fill out vehicle cleaning and inspection checklist (V.I.C.A.S.) for each vehicle or equipment cleaning and inspection checklist (E.I.C.A.S.) as appropriate.		(O) Inform NRM and LM that vehicle or equipment is ready for Kaho'olawe deployment.

SPECIAL REQUIREMENTS: None	
PERSONNEL BY LABOR CATEGORY LM NRM NRQCM	
EQUIPMENT	
ITEM	QUANTITY
High pressure water spray	
Phosphate soap	
Disinfectant	
Hand brush	
Hand sponge	
Vehicle Inspection Checklist or Equipment Inspection Checklist (as applicable)	
ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT: None	
SPECIAL TRAINING AND REFRESHER REQUIREMENTS: None	
WAIVERS, EXEMPTIONS, SPECIFIC AUTHORIZATIONS, OR APPROVED DEVIATIONS THAT APPLY TO THIS ACTIVITY: None	

VEHICLE INSPECTION CHECKLIST FOR ALIEN SPECIES (V.I.C.A.S.)

Vehicle ID: _____

Date: _____

	Inspected?	Wash Necessary?		Wash Completed?	
Outside					
Tires	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Tire Tread	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Tire Rims	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Front	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Back	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Front Bumper	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Rear Bumper	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Molding	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Front Grill	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Underside					
Carriage	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Fenders:	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Front	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Back	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Suspension	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Exhaust Pipe	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Inside					
Seats	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Floor Mats	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Compartments	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Comments:					
Signature (Logistics Manager): _____			Badge No. _____		

Date: _____

06/17/98



g.2 Prevention of Introduction of Alien Species at On-Island Access Points

Supervisor's Statement

1. The Supervisor will sign this statement:
 - a. When first assigned as supervisor of the operation.
 - b. When an approved change or revision is made to the SOP.
 - c. During the last two weeks of every quarter.
 - d. When he or she has not supervised the operation for more than 15 consecutive days.
2. I have personally reviewed each of the operational steps of this SOP and have no question in my mind that the operation can be performed safely and efficiently using the SOP. I have verified to my satisfaction that my operators have been trained and can do their parts of the operation safely and efficiently, and I have instructed them to follow the SOP without deviation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from the SOP is allowed.

Printed Name	Signature	Badge Number	Date

Operator's Statement

1. The operator will sign this statement:
 - a. When first assigned to the operation.
 - b. When an approved change is made to the SOP.
 - c. During the last two weeks of every quarter.
 - d. When he or she has been absent from the job for more than 15 consecutive workdays.
2. I have read or have had read to me and understand the general and specific safety and environmental requirements, personnel and explosive limits, work description, hazard briefing, and inspection requirements necessary to accomplish this operation. I have been thoroughly trained in, and am familiar with, my part of the operation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from it is allowed.

Printed Name	Signature	Badge Number	Date

Hazard Analysis

ACTIVITY: Prevention of Introduction of Alien Species at On-Island Access Points				PREPARER		DATE: 06/17/98	
Item no.	Description Of Operation	Description Of Hazard	Effect On Operation	Hazard		RAC without Control	RAC with Control
				Severity	Probability		
	Establishment of monitoring stations.	Injury from unidentified UXO during staking of station corners.	Explosion/destruction	1	D	2	IE(3)
							Before driving stakes, ensure subsurface is void of anomalies. If anomalies are detected, avoid driving stakes within a one (1) meter radius of the anomaly.

Operations

OPERATION: Environmental and Natural Resource Protection		ACTIVITY NO.: A8-g.2
ACTIVITY: Prevention of Introduction of Alien Species at On-Island Access Points		
PURPOSE OF ACTIVITY: To monitor any new introduction of non-indigenous species		
EXPLOSIVE LIMITS: N/A		
DISTANCE: ft (m)		N.E.W. (lbs):
PERSONNEL LIMITS: N/A		
OPERATORS:		SUPPORT: OTHER:
STEP NO. & DESCRIPTION		SPECIFIC INSTRUCTIONS (Safety, Operational, Quality Checks)
1. The NRM and NRS read and understand Section 14 of the Environmental and Natural Resources Protection Plan and KIRC report entitled "Determination of Baseline Conditions for Introduced Marine Species in Nearshore Waters of the Island of Kaho'olawe, Hawai'i".		(O) A copy of the Environmental and Natural Resources Protection Plan shall be stored at the Maui Technical Office for review.
2. Obtain wooden stakes or Reebars from MTO.		(S) UXOS shall provide briefing regarding UXO/OE Safety.
3. With UXOS establish at least three 1X1 m monitoring stations/quadrants at each of the unloading areas on Kaho'olawe..		(S) Obtain approval from UXOS, and RCO before station placement. (O) Have UXOSS sweep with point detection instrument to determine safe areas for permanent stake out, per Range Control Activity A23-f, Geophysical Detection Operation. (O) Label wooden stakes with the words (Alien Species Quadrant-DO NOT REMOVE) (O) Notify RCO of the placement of the quadrants.
4. Before full operations take place or within the first two months of vehicular and personnel deployment, survey each of the monitoring stations and record the quantity and type of species.		
5. Notify Surveyor to locate the position of each of the stations and record them.		(O) Station locations shall be entered into the KIGIS.
6. The NRS will survey these monitoring stations no less than twice a year and note any new species. Keep in mind that seasonal fluctuations may exist for many plant and animal species.		
7. Record and identify any new species introductions and communicate to the NRM. Navy and KIRC will also be advised and a management recommendation for its removal will have concurrence with the Navy before being implemented.		

<p>8. For land plants, species will be identified, recorded, and exterminated. For land animals, individual(s) will be trapped/caught, identified, and exterminated from the island. For each, the probable cause of its introduction (i.e., clothing, boots, equipment, etc.) will be identified, cleaned and procedures for further transport methods to Kaho'olawe may be amended as appropriate.</p>					
<p>SPECIAL REQUIREMENTS: None</p>					
<p>PERSONNEL BY LABOR CATEGORY</p> <p>NRS NRM UXOS Surveyor</p>					
<p>EQUIPMENT</p> <table border="1"> <thead> <tr> <th>ITEM</th> <th>QUANTITY</th> </tr> </thead> <tbody> <tr> <td>Wooden Stakes</td> <td>12 for each on-island access point</td> </tr> </tbody> </table>		ITEM	QUANTITY	Wooden Stakes	12 for each on-island access point
ITEM	QUANTITY				
Wooden Stakes	12 for each on-island access point				
<p>ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT: None</p>					
<p>SPECIAL TRAINING AND REFRESHER REQUIREMENTS: None</p>					
<p>WAIVERS, EXEMPTIONS, SPECIFIC AUTHORIZATIONS, OR APPROVED DEVIATIONS THAT APPLY TO THIS ACTIVITY: None</p>					



g.3 Prevention of Introduction of Alien Species - Personnel Inspection Prior to Island Access

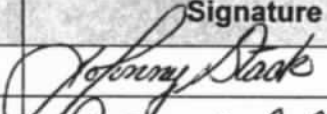
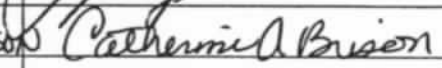
Supervisor's Statement

1. The Supervisor will sign this statement:
 - a. When first assigned as supervisor of the operation.
 - b. When an approved change or revision is made to the SOP.
 - c. During the last two weeks of every quarter.
 - d. When he or she has not supervised the operation for more than 15 consecutive days.
2. I have personally reviewed each of the operational steps of this SOP and have no question in my mind that the operation can be performed safely and efficiently using the SOP. I have verified to my satisfaction that my operators have been trained and can do their parts of the operation safely and efficiently, and I have instructed them to follow the SOP without deviation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from the SOP is allowed.

Printed Name	Signature	Badge Number	Date
Benton K. Pang	B.K. Pang		29 June 1998

Operator's Statement

1. The operator will sign this statement:
 - a. When first assigned to the operation.
 - b. When an approved change is made to the SOP.
 - c. During the last two weeks of every quarter.
 - d. When he or she has been absent from the job for more than 15 consecutive workdays.
2. I have read or have had read to me and understand the general and specific safety and environmental requirements, personnel and explosive limits, work description, hazard briefing, and inspection requirements necessary to accomplish this operation. I have been thoroughly trained in, and am familiar with, my part of the operation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from it is allowed.

Printed Name	Signature	Badge Number	Date
JOHNNY STACK			06-29-98
CATHERINE BRISON			06-29-98

Hazard Analysis

ACTIVITY: Prevention of Introduction of Alien Species - Personnel Inspection		PREPARER		DATE: 06/17/98				
Item no.	Description Of Operation	Description Of Hazard	Effect On Operation	Hazard		RAC without Control	Recommended Control	RAC with Control
				Severity	Probability			
1	Personnel Inspection and Wash	This operation does not require a hazard analysis.						

Operations

OPERATION: Environmental and Natural Resource Protection		ACTIVITY NO.: A8-g.3
ACTIVITY: Prevention of Introduction of Alien Species - Personnel Inspection Prior to Island Access		
PURPOSE OF ACTIVITY: To visually inspect personnel, personnel equipment, and clothing before deployment to Kaho'olawe.		
EXPLOSIVE LIMITS: N/A		
DISTANCE: ft (m)		N.E.W. (lbs):
PERSONNEL LIMITS: N/A		
OPERATORS:		SUPPORT: OTHER:
STEP NO. & DESCRIPTION		SPECIFIC INSTRUCTIONS (Safety, Operational, Quality Checks)
1. The NRS shall read and understand Section 14 of the Environmental and Natural Resources Protection Plan		(O) A copy of the Environmental and Natural Resources Protection Plan shall be stored at the Maui Technical Office for review.
2. The NRS or NRM shall brief all PUXB employees on the importance of keeping alien species from becoming established on Kaho'olawe during UXO clearance operations. This can be delivered as a part of the natural resources personnel briefing.		(O) Arrange briefing with UXOSO and as part of the personnel training.
3. Designate work boots for use on Kaho'olawe only. If boots are used on other islands, scrub the bottoms of the boots with a brush and water at the Maui facility before deployment to Kaho'olawe.		(Q) The NRM or NRQCM shall be available for additional inspection if necessary.
4. Visually inspect clothing, bags and equipment exteriors to ensure that seeds and soil are not present.		(O) Scrub areas of soil and seeds as necessary.
5. Wash, scrub or replace equipment, or clothing as recommended by the NRS or NRM.		
6. Visually re-inspect areas to ensure they are soil and seed free.		(O) NRM or NRQCM shall be available for additional inspection if necessary.
7. If no visible hardened dirt, seeds, or soil are present, release personnel for deployment. Otherwise, repeat steps 4 through 6.		(O) Inform LM that employee is ready for Kaho'olawe deployment.
SPECIAL REQUIREMENTS: None		
PERSONNEL BY LABOR CATEGORY		
Each personnel designated for on island clearance operations		
NRS		
ES		

EQUIPMENT	
ITEM	QUANTITY
Phosphate soap	
Disinfectant	
Hand brush	
ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT: None	
SPECIAL TRAINING AND REFRESHER REQUIREMENTS: Natural Resources and Alien Species Prevention Training	
WAIVERS, EXEMPTIONS, SPECIFIC AUTHORIZATIONS, OR APPROVED DEVIATIONS THAT APPLY TO THIS ACTIVITY: None	